ABSTRACT OF THE DISCLOSURE

According to the invention there is provided a computer implemented method for provisioning broadband service in a Point-to-Point Protocol over Ethernet (PPPoE) network. A PPPoE session is established, and a username is randomly chosen from a list of usernames stored on a modem. An authentication request is then transmitted from the modem to a Broadband Remote Access Server (BRAS) over a PPPoE network. The BRAS subsequently load balances the authentication request between the multiple Broadband Service Nodes (BSNs) and transmits the authentication request to one of the multiple BSNs determined by the load balancing. The modem then receives authorization from at least one of the multiple BSNs. The authorization preferably comprises a temporary dynamic Internet Protocol (IP) address. Full configuration details, including a static IP address, are then obtained from an Internet Service Provider (ISP). The invention also provides a system and computer program product for performing the above. (149 words)